

C O P Y (Letter to RMB from [REDACTED] Perkin- July 11, 1958
Elmer Corp.)

Dear Dick:

On June 19th several of us gathered in Washington to examine material which had accumulated from operations over the past two months. This material was quite disappointing to me for it showed me the same characteristics that we had seen a year ago in the previous season's operations. We had been telling ourselves that the conditions, particularly those under which the material had been processed, were far from ideal and that this had a deleterious effect on the quality. While some degradation probably could be attributed to these processing conditions, it was obviously a fact that A material, processed under the same conditions, was more useful to the PIs than B.

At that time, and in the intervening weeks, I have been trying to determine in my own mind the circumstances which produced these results. I set aside consideration of the actual technical problems associated with the hardware and tried rather to find more basic explanations for a situation which embodied, first, these same effects having been observed the season before and, second, that the program at Edwards to remove them during the first month or two of this year had enviable record of reliability and had obtained a very considerable amount of what I consider first rate results. The only explanation which I could find was that the mechanism of supporting the camera in the field was quite different and, by its difference, incapable of accomplishing the task which had been accomplished at Edwards.

I could not convince myself that local conditions, such as temperature or humidity, either in the operational environment of the camera or of the processing, could be a complete explanation of the obvious troubles. To be sure, each malfunction, whether a mechanical breakdown, a poor adjustment or some annoying characteristic, such as fogging, could be analyzed and explained and action taken for its correction, but the basic problem reverted to the question of why these things had not been discovered and proper action taken so that they either did not occur in the first place or if, having happened, were not immediately repaired.

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In response to the question of what we should do about it all, I offered to discuss the philosophy of the field service operation on an informal basis with [REDACTED] and to attempt to determine whether [REDACTED] or his Corporation recognized the problem and were taking steps which, at least to me, appeared adequate to correct the situation. As a parallel program, I suggested that the two field supervisors be brought in to see some of the same material which I looked at in June.

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I talked to [REDACTED] in California on the 26th of June and Messrs. [REDACTED]

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and myself gathered in Washington for the latter

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program on July 8th. As a result of these activities I feel that Hycon does not recognize the problem for what it is and that the steps we have taken, and those that they now plan to take, are not sufficient in themselves to insure a significant improvement.

I feel that two changes must be made. First, a mechanism must be set up where a sufficient amount of material is processed in such a way as to make available to the field supervisor, complete information on the performance of this camera. He must see enough to permit him to discover every malfunction, major or minor, which took place during the mission.

In the beginning this represents a large amount of film--probably clips from both ends and some samples from the intermediate portions, so selected as to permit examination of objects which will demonstrate resolving power. I realize that during the training activities this is not difficult to arrange in either detachment A or B, but that on what might be described as official missions, it may result in some sacrifice of quality of material. In the beginning this sacrifice, in my mind, is not only worthwhile, but necessary. It seems to me this is a small price to pay, taking the chance of reducing the quality in the processing, in order to insure subsequent proper functioning and high quality. This is the only way I can see to reduce the probability of returning on subsequent missions with material of even lower usefulness. I would hope that the history at the Ranch would be repeated in that after a few such missions, the discovery of such malfunctions would become only an occasional event and, thus, as confidence builds up, less and less material need be examined. As an example of such history, malfunctions and other problems are so rare in the A camera that there is no need to monitor its performance on important missions by processing in the field.

The second recommended change follows: All of this sampling, processing and examination will only be worthwhile and result in the desired end if the people who do the processing and examination and, most important, the subsequent improvement of hardware to fit operating conditions, have the same degree of competence that was brought to bear on the problem early in the spring. Here again, it may not be necessary to retain this competence indefinitely, but it is my feeling that in large measure it will be required to solve new problems that each new environment may impose.

Cameras which took excellent pictures under the low scattered light conditions of the southwest, now appear to be taking much poorer pictures in the bright haze conditions encountered during the last month or two. This problem could have been isolated and, I am sure, solved in the field if it had been discovered immediately following the first mission. There is no doubt in my mind that in every major respect the cameras could have ~~been~~ done the job they have been asked to do--if the information feedback had been fast enough, and if the competence at the point it was needed, in the field, had been the same as was brought to bear on the problems at Edwards. Thus, I can see no alternative but to increase the competence

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where the problems are encountered.

If there is any way in which I, or the Perkin-Elmer Corporation, can assist further in this matter, please do not hesitate to let me know.

Sincerely yours,

/s/ Rod

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